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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,153	04/05/2004	Takashi Akase	Q80941	1197

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EXAMINER

UHLENHAKE, JASON S

ART UNIT PAPER NUMBER

2853

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/817,153	<b>Applicant(s)</b> AKASE, TAKASHI	
	<b>Examiner</b> Jason Uhlenhake	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1,3 and 7-11 is/are rejected.
- 7) ☒ Claim(s) 2 and 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/5/2005</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1, 3, 7-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ahne et al (U.S. Pat. 6,637,853).

#### ***Ahne discloses:***

- ***regarding claim 1***, printing method for printing by forming dots on a medium using a movable print head (Column 3, Lines 39 – 50)
- step of moving said print head by a first set amount from a reference position (Column 3, Lines 5 – 15) used when printing and printing a first reference pattern on said medium (Column 4, Lines 13 – 20)
- step of detecting a position of an edge of said medium on the reference position side in the direction of movement of said print head (Column 6, Lines 10 – 23; Column 7, Lines 26 - 35)
- step of moving said print head to a position that is apart by a second set amount from said position of the edge that has been detected and printing a second reference pattern (Column 4, Lines 22 – 41)

**regarding claim 3**, print head prints target information on the medium by forming dots by ejecting or sublimating ink (Column 3, Lines 5-23); a print start position of the print head is corrected in accordance with a correction amount that is determined according to a relationship between the first reference pattern and a second reference pattern (Column 2, Line 64 – Column 3, Line 23; Column 3 Lines 52-59)

- **regarding claim 7**, an edge of the medium is detected by an optical sensor; and said print head prints said second reference line using the edge of the medium that has been detected by said optical sensor as a reference (Column 6, Lines 11 – 30; Column 4, Lines 22 – 41)

- **regarding claim 8**, a computer readable medium (Column 2, Lines 65 – 67; Column 3, Lines 1 – 30), comprising the following codes:

- code for moving a movable print head by a first set amount from a reference position used when printing and printing a first reference pattern on the medium (Column 3, Lines 5 – 15; Column 4, Lines 13 – 20)

- code for detecting a position of an edge of the medium on said reference position side in the direction of movement of said print head (Column 6, Lines 10 – 23)

- code for moving said print head to a position that is apart by a second set amount from said position of the edge that has been detected and printing a second reference pattern (Column 4, Lines 22 – 41)

- **regarding claim 9**, printing apparatus comprising: a movable print head for performing printing by forming dots on a medium (Column 3, Lines 39 – 50)

- sensor for detecting an edge of the medium (Column 6, Lines 10 – 23)

- controller for controlling operation of said print head and said sensor  
(Column 3, Lines 52 – 59)
- controller causes: print head to move by a first set amount from a reference position used when printing and print a first reference pattern on the medium  
(Column 3, Lines 5 – 15; Column 4, Lines 13 – 20)
- said sensor to detect a position of an edge of the medium on said reference position side in the direction of movement of said print head (Column 6, Lines 10 – 23)
- said print head to move to a position that is apart by a second set amount from said position of the edge that has been detected and print a second reference pattern (Column 4, Lines 22 – 41)
- ***regarding claim 10***, printing system comprising: a printing apparatus and a computer that is capable of communicating with said printing apparatus (Column 2, Lines 65 – 67; Column 3, Lines 1 – 30)
- printing apparatus includes: a movable print head for performing printing by forming dots on a medium (Column 3, Lines 39 – 50)
- a sensor for detecting an edge of the medium (Column 6, Lines 10 – 23)
- a controller for controlling operation of said print head and said sensor  
(Column 3, Lines 52 – 59)
- controller causes: print head to move by a first set amount from a reference position used when printing and print a first reference pattern on the medium  
(Column 3, Lines 5 – 15; Column 4, Lines 13 – 20)

- said sensor to detect a position of an edge of the medium on said reference position side in the direction of movement of said print head (Column 6, Lines 10 – 23)
- said print head to move to a position that is apart by a second set amount from said position of the edge that has been detected and print a second reference (Column 4, Lines 22 – 41)
- ***regarding claim 11***, a pattern for correction, which is used with a printing apparatus for printing by forming dots on a medium using a movable print head and which is for setting a print start position of said print head (Column 3, Lines 39 – 50)
- a first reference pattern that is printed by said print head after said print head has been moved by a first set amount from a reference position used when printing (Column 3, Lines 5 – 15; Column 4, Lines 13 – 20)
- a second reference pattern that is printed by said print head after said print head has been moved to a position that is apart by a second set amount from a position of an edge of the medium on said reference position side in the direction of movement of said print head (Column 6, Lines 11 – 30; Column 4, Lines 22 – 41)

### ***Response to Arguments***

Applicant's arguments filed 5/24/2006 have been fully considered but they are not persuasive. Please see the above rejections regarding Ahne et al. Applicant argues that Ahne et al does not disclose printing a second reference pattern after the step of detecting the position of the edge. Ahne et al discloses the reference position may be

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determined based on the position of a start bar (10) or the position of an edge of the print medium (8) (Column 7, Lines 25-35). By referencing the start bar/edge of medium, the print medium advances predetermined distances (RD1, RD2 etc...), then the controller generates print commands to cause the print head to continuously fire only one nozzle until completion of the test images (Figure 3, Column 3, Lines 5-23; Column 4, Lines 22-42)

***Allowable Subject Matter***

Claim 12 is allowed.

Claims 2, 4 – 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indicating allowable subject matter of claim 2 is the inclusion of the method step of printing that includes either one of said first reference pattern or said second reference pattern is printed while suitably changing either one of said first set amount or said second set amount. It is this step found in the claim, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

The primary reason for indicating the allowable subject matter of claims 4-6 is the inclusion of the method step for printing that includes the first reference pattern and said second reference pattern, the reference pattern that is printed while suitably changing

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either one of said first set amount or the second set amount. It is this step found in the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The following is an examiner's statement of reasons for allowance: The primary reason for the allowance of claim 12 is the inclusion of the limitation offprint start position correcting means for printing either one of said first or second reference pattern while suitably changing its set amount to correct a print start position in accordance with a correction amount that is determined according to a relationship between said first and second reference patterns. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."



***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

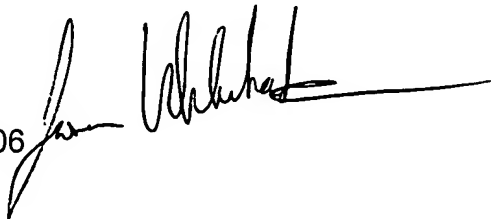
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSU  
July 24, 2006



 8/10/06  
**K. FEGGINS**  
**PRIMARY EXAMINER**